

REMARKS

I. General

This Amendment is Applicants' response to the Office Action dated June 2, 2004 ("Office Action"). The pending claims in the present application are claims 11-18, 21-28, and 31-46. The Examiner has rejected all of the pending claims under one of the following statutory provisions: 35 U.S.C. §§ 102 or 103. In this Amendment, Applicants have traversed each of the Examiner's bases for rejecting the claims. More specifically, Applicants have amended claims 11, 21, 31, and 39 to clarify the present invention and demonstrate how the present invention is not anticipated or rendered obvious by the U.S. Patent No. 5,534,744 ("the '744 patent). The dependent claims that depend from them also are not anticipated or obvious for the same reasons. As such, Applicants respectfully request that the application be passed to issue in due course.

II. The Present Invention is Novel and Nonobvious

In the Office Action, the Examiner has relied on U.S. Patent No. 5,534,744 to reject certain claims of the application under 35 U.S.C. § 102 for anticipation and certain other claims under 35 U.S.C. § 103 for obviousness. Applicants have reviewed the '744 patent and the Examiner's bases for rejection and submit that this reference does not anticipate or render obvious any of the claims of the present application. This will be shown in the remainder of this Section.

A. Claims 11, 13, 15, 17, 21, 23, 25, 27, 31, 33, 35, 37, 39, 41, 43, and 45-46 are not Anticipated

The only reference that the Examiner has cited in rejecting the claims 11, 13, 15, 17, 21, 23, 25, 27, 31, 33, 35, 37, 39, 41, 43, and 45-46 for anticipation is the '744 patent. Claims 11, 21, 31, and 39 are independent claims and the remainder are dependent claims. At page 2 of the Office Action, the Examiner states the following in rejecting the claims:

...Leroux et al. [the '744 patent] disclose a cathode substrate including a substrate 2 (Fig. 6), a cap layer (silica layer 4 and layer 52), an anti-reflective coating or light blocking layer (52, here layer 52 is an light absorbing layer, line 35-36 of Col. 6, light absorbing does not reflect light thus it is also anti-reflective) included within it (see col. 5, lines 49-50, underlays 52), and an array of emitter tips 12 formed on the cap layer.

The basic structure that is shown in Figure 6 is described with respect to Figure 1 (which is in the prior art). However, the structure in Figure 6 is meant to be viewed through the substrate and not through the anode or face plate as shown in Figure 1. This is an important distinction that will be addressed subsequently. The '744 patent states the following about the structure of Figure 1 and, therefore, Figure 6 with respect to what the Examiner contends teaches the present invention (column 1, lines 38-45):

An embodiment of the known electron source is diagrammatically shown in plan view in FIG. 1A and in sectional view in FIG. 1B, which is the section CC of FIG. 1A.

This known source has a matrix structure and comprises an e.g. glass structure 2 and optionally on the latter a thin silica film. On the latter is formed a series of electrodes in the form of parallel conductive strips serving as cathode conductors and constituting the columns of the matrix. (Emphasis added)

In the above quotation, it is noted that the Examiner is now contending for the first time that light blocking layer is light absorbing, and as such, it is also anti-reflective. Applicants submit that this is unsupported by the record before the Examiner, nor has the Examiner cited any support for this contention. Applicants note that according to the present invention, the anti-reflective layer and light absorbing layer are two distinct concepts and should be treated as such. Accordingly, the Examiner's reliance on the '744 patent to teach or suggest an anti-reflective layer is misplaced and should be withdrawn.

The foregoing quotation makes plain that the silica layer 4 is not needed since it may be optionally provided. This means that the underlying substrate, glass structure 2, can appropriately have the cathode conductors placed on it without degradation in performance. If this were not the case, the silica layer 4 would have been mandatory.

In the present invention, the cap layer is not optional, it is mandatory. The cap layer is needed to protect against the low quality substrate. This, however, is not true of the new structure that is allegedly a cap layer including silica layer 4 and partial layers 52 and 5. In fact, the present application even permits the substrate to be formed from plastic because of the existence of the cap layer. There is no teaching or suggestion in the '744 patent that the substrate could be soda-lime glass or plastic that is taught by the present invention and the resultant part would perform properly since the '744 patent provides that the series of electrodes can be placed directly on the substrate. Therefore, the '744

patent does not anticipate the claims 11, 13, 15, 17, 23, 25, 27, 31, 33, 35, 37, 39, 41, 43, and 45-46 of the present invention and this rejection should be withdrawn.

Claims 11, 21, 31, and 39 have been amended to recite that the anti-reflective coating or light blocking layer extent across the entire expanse of the cap layer. This differs greatly from what is set forth in the '744 patent. To the extent that the '744 patent provided any disclosure with regard to any association of silica layer 4 with light absorbing element 52 is shown in Figure 6 it is fundamentally different from the present invention. As is plain, Figure 6, is directed to a structure in which substrate 2 is the screen, which is not the structure of claims 11, 21, 31, or 39 in which the screen is at anode 14 – at the opposite side of the structure. This permits the substrate of the present invention to be constructed of a low quality material, such as soda-lime glass and plastic, since the substrate is not the screen. Further, the placement of 52 beneath the conducting layers in Figure 6 of the '744 patent is not meant to serve the same purpose as in the present invention, which in the present invention is to absorb light or not reflect light entering from the anode. Moreover, by the anti-reflective layer or light blocking layer being disposed across the expanse of the cap layer, it serves a different purpose than element 52 in Figure 6 of the '744 patent. Therefore, Applicants have demonstrated that the claims of the present invention are not anticipated or obvious in view of the '744 patent.

Applicants also submit that the Examiner has misread the quoted section of the '744 patent at column 5, lines 49 – 50. If the entire pertinent section is read, it states the following: (column 5, lines 32 – 50):

In this case, it is possible to produce a new screen structure in which luminophor 48 is observed from its excitation side through the micropoint source (the silica layers 4 and 8 being transparent to light 50 and the substrate 2 being e.g. made from glass so as to be also transparent). This also makes it possible to improve the luminous efficiency of the screen and consequently lower its electric power consumption. In this case, it is preferable to choose conductive 46 a layer able to reflect the light 50 emitted by the luminophor.

In the case of a screen according to the invention, which is observable through its election source [silicon layers 4 and 8], each cathode conductor and each grid are preferably formed on an under layer 52 able to absorb the light 54 outside the screen, as shown in the

embodiment of FIG 6. This makes it possible to improve the contrast of the screen illuminated by said light 54.

Therefore, the said external light 54 is absorbed instead of being reflected toward the observer.

The quotation above, as explained before, makes plain that the '744 patent does not anticipate or render obvious the claims of the present invention.

The first portion of the above quotation refers to Figure 5 and that the luminophor 48 is observable through silica layers 4 and 8. The Examiner has equated the combination of silica layer 4 and 52 to the cap layer of the present invention. In this embodiment in the '744 patent, the conductive layer 46 is a material that will reflect the light emitted by the luminophor -- this, however, is at the opposite side of the structure. It is to be noted in Figure 5 that the light passes through cathode conductors 5.

In the second portion of the above quotation, there is the added feature of under layer 52 to absorb the light 54 as shown in Figure 6. This is clearly shown by the two light rays in Figure 6. The first light ray is absorbed by under layer 52 that is beneath cathode conductor 5 and the second light ray is absorbed by under layer 52 that is beneath square 10a. Even though the Examiner now attempts to change the position as to what is the cap layer, the under layers that are shown in Figure 6 are not associated with or within silica layer 4 that is shown in this Figure. Moreover, given that under layers 52 are associated specifically with the cathode connectors 5 and square surfaces 10a wherever they may be located because that is how they are formed, it would not render obvious the claims of the present invention that have an anti-reflective coating or light blocking layer within the cap layer and a different purpose as described above.

Claims 12-18 depend from claim 11, claims 22-28 depend from claim 21, claims 32-38 depend from claim 31, and claims 40-46 depend from claim 39. Each of the dependent claims traverses the Examiner's rejection for anticipation for the same reasons as set forth for the claims from which each depends. Moreover, each is not obvious for these same reasons. Accordingly, this rejection should be withdrawn.

Applicants have overcome the anticipation rejection under 35 U.S.C. § 102. Applicants also submit that these claims are not obvious in view of the '744 patent. Therefore, Applicants have traversed this rejection and respectfully request that it be withdrawn.

B. Claims 12, 14, 16, 22, 24, 26, 32, 34, 36, 40, 42, and 44 are Non-Obvious

In the Office Action, the Examiner rejected dependent claims 12, 14, 16, 22, 24, 26, 32, 34, 36, 40, 42, and 44 for obviousness under 35 U.S.C. § 103 based on the '744 patent. In rejecting these claims, the Examiner stated the following:

Referring to claims 12, 22, 32, and 40, Leroux et al. [the '744 patent] disclose a cathode substrate as recited in claims 11, 21, 31, and 39 including a substrate 2 made of glass. See col. 1, lines 41-45. Leroux et al. do not disclose a cathode substrate wherein the substrate 2 [is] made of soda-lime glass. The selection of known materials for a known purpose is generally considered to be within the skill in the art. It would have been obvious to use soda-lime glass, for the substrate 2, as disclosed by Leroux et al., because the selection of known materials for a known purpose is generally considered to be within the skill of the art.

Specifically, in rejecting claims 12, 22, 32, and 40, the Examiner's position is that it would be known in the art to select soda-lime glass or other inexpensive substrate, including plastic, for the structure that is shown in Figure 1 of the '744 patent is not supported by this patent. As discussed in the preceding Section (relating to the claims not being anticipated by the '744 patent), there are a number of bases why the '744 does not render claims 11, 13, 15, 17, 21, 23, 25, 27, 31, 33, 35, 37, 39, 41, 43, and 45-46 anticipated or obvious. Therefore, for the same reasons that these claims are not anticipated or obvious in view of the '744 patent, dependent claims 12, 14, 16, 22, 24, 26, 32, 34, 36, 40, 42, and 44 are not rendered obvious by the '744 patent. More specifically, claims 12, 14, and 16 depend from claim 11, claims 22, 24, and 26 depend from claim 21; claims 32, 34, and 36 depend from claim 31; and claims 40, 42, and 46 depend from claim 39. As such, these dependent claims add features to the independent claims from which they depend and each includes the features of these independent claims. Applicants have demonstrated that independent claims 11, 21, 31, and 39 are not anticipated or rendered obvious by the '744 patent, and for these same reasons, dependent claims 12, 14, 16, 22, 24, 26, 32, 34, 36, 40, 42, and 44 are not anticipated or rendered obvious by the '744 patent.

Applicants have traversed each of the grounds for rejecting dependent claims 12, 14, 16, 22, 24, 26, 32, 34, 36, 40, 42, and 44 for obviousness under 35 U.S.C. § 103 based

on the '744 patent. Noting this Applicants respectfully request that this rejection be withdrawn.

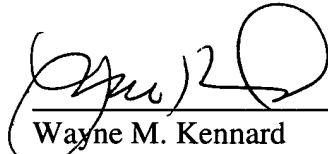
Applicants have noted the Examiner's statements that the cap layer according to '744 patent is not just silica layer 4 but now also partial layer 52 and partial conductive layer 5. This construction by the Examiner, however, does not in any way disclose the single cap layer as in the present invention which has within the anti-reflecting coating or light blocking layer; and each of these layers extend across the expanse of the substrate. Accordingly, the Examiners contention is misplaced and should be withdrawn.

III. Conclusion

Applicants have traversed each and every rejection that the Examiner raised in the Office Action date June 2, 2004. As such, the claims are in condition for allowance. The present invention is new, non-obvious, and useful. Reconsideration and allowance of the claims are requested.

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Respectfully submitted,



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